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Stock Market Simulation

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Stock-Market Simulations

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Abstract

This is a 7 week research project that utilizes various tools online, library books, simulations, IQP advisor, to study intelligent ways of investing in the stock market and also understanding the vast majority of the opportunities in investment. With the knowledge gained from this experience we will be better equipped to tackle any area of the market and any issues that might arise.

Chapter 1: Introduction

1.0 Introduction

The stock market has always been a fascinating environment for trading today with great proliferation of stock ownership in business, people’s interest making the number of shares traded in the stock market approach record proportions. There is the monetary reward that attracts people to the stock market that provide financial rewards and capital by share luck or by observation and analysis. Though it is not proven on the best methods of investment, it is our goal in this IQP to experiment written and theoretical methods that will help in monetary gains or profit and our understanding of the stock market.

In our experiment that will last for seven weeks, we will be trading and monitoring the behavior of the stock market and comparing them with written methods that includes technical and fundamental analysis and approach. The situation of the stock market involves that no one person will always be successful (no 100% success); similar to gambling except for in gambling you really don’t have any control of your faith. Therefore, our scope is to device methods that when implemented will induce a low risk and high reward investment environment.

Our plan is devising sufficient ways that will help us satisfy our goal. First of all every member of our group will be involved in reading books that involve technical analysis and fundamental analysis, we will also be using the internet to research materials that will strengthen our knowledge on these analysis. For the first week we will be studying the history of the stock market and investigating methods of investing. Then we will start our short term and long term trading from the second week that will last through our research period. We will also be reporting our observations in a weekly report to our professor Dalin Tang and each group member will be required to follow the time table made at the start of the research. Research period will also include learning about not only stocks but also fixed income investment and broker agencies with the purpose of observing the reliability of the methods compared to just trading in an ever changing and somewhat unpredictable stock market. At the end of the research period we should be able to come up with a conclusive method backed by our analysis based on any of our success to trade in the stock market to accomplish gainful results.

1.1 Brief history

When someone talks about stock market or stock exchange in general, clearly in some people's mind would question "What is stock?" and "Is stock market a place to buy or sell stocks?" Stock market is a place where stocks and shares are bought and sold. It comprised of all trading center in the U.S. When people buy stock or sell stock they do not necessary need to go to a specific location. For example, the Dollar value traded annually on the NYSE amounts to 5 times more than all other exchanges in the world and with the growth of electronic transactions, they can simply stay home and exchange over the computer. Stock exchange is a form of stock market, a physical location where stocks and bonds are bought and sold, such as the New York Stock Exchange, NASDAQ or American Stock Exchange. The founding of the first stock exchange actually took place in Philadelphia in 1790, shortly after the Revolution War fought and won. In 1792, they opened the New York stock market on Wall Street. The New York Stock Exchange (NYSE) is now become a main market in United States, it has since moved past its humble beginnings to the point where its system now facilitates billions of dollars worth of trades each day.

At one time most companies aspired to be traded on the NYSE. There was another market that has immerged and is heavily populated by technology related stocks. It is called NASDAQ with its foundations in the roots trades and volumes of stocks that have now evolved to one of the largest equity markets in the United States. Many large companies now trade on the NASDAQ. Founded in 1971, the National Association of Securities Dealers Automated Quotation or NASDAQ was the first stock exchange to recognize the role of electronics in stock trading.

Stocks are shares in a company. When someone buys shares of a company, they become part owners of that company. As a shareholder, they get the same basic rights and privileges as people who own millions of shares. They can receive quarterly reports and an annual report with information on how the company is doing.

If the company makes money in profits and dividends, their stock’s value will increase. When the company loses money, their stock’s value will decrease. Quarterly reports tell how much money the company has gained or lost during the reporting period. This will keep them updated on how well or poorly their stocks are doing.

Before the stockowner wants to exchange any stock, they have to go through with stockbrokers. Stockbrokers are members of this owners association. A stockbroker invests in the stock market for individuals or corporations. Only members of the stock exchange can conduct transactions, so whenever individuals or corporations want to buy or sell stocks they must go through a brokerage house. People who trade stock electronically don't need to have a broker. They can simply open an account online for certain company and start trading. Each transaction will be charged if one chooses to trade stocks this way. The fee for each transaction is set differently based on different companies.

1.2 DOW

The Dow has three averages where it determines from Utility, Transportation, and Industrial, which are well known as the DJIA (Dow Jones Industrial average), DJUA (Dow Jones utility average), and DJTA (Dow Jones Transportation average). It is a market indicator which measures the performance of the stock market. It is the most widely used of all stock market indicators. It is listed on the New York Stock Exchange (NYSE) under the symbol DJIA to indicate industrial stocks such as GE

(General Electric). The Dow created over 100 years ago by Charles Henry Dow, Charles M. Bergstresser and Edward Davis Jones. It tracks the performance of 30 well established companies, often called ‘blue chips’. Here there are another two Dow Jones indexes. The Dow Jones Transport Average (DJTA) composed of 20 stocks belonging to the transport industry (by rail, land or air) and finally DJUA (Dow Jones Utility Average), which is composed of 15 stocks belonging to the electrical and gas sectors. These indexes called an “average” because they computed by adding up the stock prices and dividing by the number of stocks. DJIA didn’t have 30 companies originally. It started with 12 in 1896 and rising to 20 in 1916. The 30-stock average started in 1928 and remained so since then. The stocks in the DJIA are selected by the editors of the Wall Street Journal. The major difference between the DJIA and other major stock-market indexes is that the DJIA is un-weighted while almost all other indexes weight their stocks by market capitalization, which is price times shares outstanding. Other indexes also have more stocks than the DJIA. However, all of these major indexes usually move together. The DJIA movements don’t really predict the future of the stock market. DJIA, DJTA and DJUA, these averages only reflect where the market has been.

1.3 NASDAQ

The NASDAQ is an electronic stock exchange that was introduced by the National Association of Security Dealers (NASD) in February 8, 1971, these days it is owned and controlled by the NASDAQ stock market. Today it has about 3300 strong companies and trades more stocks than any other U.S market.

When it began in 1971 it was not referred by brokers because it lowered the spread, however as time went on it was able to add more volumes and trade and became the first stock market to advertise to the public. NASDAQ ultimately hit its peak on March 2000 of 5132.52 and then fell to 1/2 of it the next year indicating the end of the dotcom era. In addition, NASDAQ has 2 markets to help the small business and the big business, the first is the NASDAQ national market that trades security and NASDAQ small cap that helps small business with potential for growth. Since the NASDAQ debut in 1971 it has become the US biggest equity market in selling more volumes of shares per day following that the stocks are small and volatile that is attractive to every investor especially the ones that are interested in diversifying the investments.

1.4 NYSE

The NYSE is the oldest and largest stock market in the United States, it started in 1792 when the Buttonwood Agreement was agreed by 24 stock brokers just outside 68 Wall Street. The exchange was closed after world war one on 1914 and it was reopened later that year the assist the war effort by selling bonds for the government. The stock exchange has been confronted with a lot of tough times starting from the 1929 crash called black Thursday that set off panic amongst investors that then followed the great depression. Also the black Monday of 1987 that started from a 22.6% fall of the DJIA (Dow Jones Industrial Average), following this was the 1997 panic when the DJIA dropped 554.26, this automatically forced the exchange to implement measures of closes whenever there is a 10, 20, and 30% drop the exchange closes for about an hr, 2 hrs, or the rest of the day so that investors can relax and continue to think straight not panic.

Today the market has been relaxed and still growing with more volume of shares that any other market in the United States. The Exchange is a non-profit corporation of 1,366 individual members, governed by a board of directors consisting of 10 public representatives, 10 Exchange members or allied members and a full-time chairman, executive vice chairman and president.

1.5 Ways to invest

The term investment has been used on almost any facet of life with all the meaning of investing the one outcome to the term that everyone agrees with is the profit. For example, if I am investing in someone’s education I expect the ultimate outcome is he/she gets a degree and find a job that can support him/her for the rest of their life. If we look at the outcome here it is getting a degree and finding a job, and as we can relate that it is not everyone that gets education that will be able to find a job to support them for the rest of their lives. This is in direct relationship with the investing in the stock market; everyone that invests in a stock market wants a profit from whatever money he puts into the market. And as related to the education example it is not because you are sowing money that means you will reap more money, but the methods and sometimes luck of how you invest that can determine the ultimate outcome. The New York Times in 1965 described that an investor has about as good a gamble for gain in stocks as in any other game of chance, but not much better. Also research center in security prices at the University of Chicago reported that the average investor, whether mature or immature, literature or illiterate, stands a good chance of making money just by buying stocks. Before one invests in a company, he will be confronted with a broker for the exchange, but since the availability of the internet people can now open there own account and enables them to be there own broker, and will be wise to adhere to the investment methods of the brokers. There are investment methods and analysis done by fundamentalists, to the technicians and the random walk theorists, though it is not certain which method is the best our practical research in this project will definitely show us how they relate and which one is the most effective. In the following paragraphs we will be making brief descriptions and the knowledge behind these methods.

The fundamentalist uses value to relate every stock to its earning power, present and future. He uses every resources of economic, scientific, financial information of the company, researches sales data, profitable statements and industry surveys. This method of more of a safeguard way to ensure that wherever you put your money has the potential of hitting it big in the long run. The fundamentalist employs a P/E (price and earning ratio) to its stocks to give it a number on which the number represents the value of the stock. For example, a company reports $5million in earning and has 5million stocks the P/E ratio = ($5million/5million shares) = $1/ share the number here is 1.

However the Technicians relate the changing of the stock market to supply and demand that creates trends he fellow, based on the data he can conclude on how the market is doing. Technicians also use charts to read patterns that are reasonable, repetitive, and predictable. One of the most popular technician methods is Dow theory formulated by Charles Dow but first published by William Hamilton in 1908 is enlisted in three companies that include industrial, utilities, and transportation. One of the benchmark of the Dow Theory is in the bear and the bull market. Dow noticed that there is a primary movement trend correlated by series of secondary movement trends and then reversed in a cyclic manner. The primary movement trend happens at the period of the highest high of the period of the lowest low. That is for a period of one year or more when there is a peak bull market and there is another pattern that passes the bull market or vice versa for the bear market, if it was bull there will continually be bull for a period of one year. Every primary movement has secondary movements that retrace 1/3 to 2/3 of the original movement starting again in the primary direction. The secondary trends are series of fluctuations in the pattern that happen after the bull market or bear market, they don’t change the market movement from bull or bear market, it happens in a series of days to weeks. The justification of the theory is also based on the parallel pattern of the industrial and the transportation chart averages (DJIA and DJRA), whenever there is a change in primary movement trend an announcement is made on what market we are in whether it is bull or bear. Another technician tool is the Elliot wave principles written by a stock market student by the name of R.N Elliot, he stated that there are 5 big waveforms (I, II, III, IV) in which 3 of them are high and two of them are low, after this there is a point A at which when the low crosses beyond this region there will be an A-B-C correlation then there will be a series of decline or market correlation in the reverse direction. Moreover, technicians are really interested in short term trading with high profit and quick loss where they employ these kinds of techniques to guide them through the market.

Figure 1 – DOW JONES INDUSTRIAL AVERAGE DIAGRAM EXAMPLE

Finally the random theorist method is around the basis that as history has no memory, so the coin has no memory. Therefore, unlike the fundamentalist using the past to predict the movement of the stock market, the random theorist believes that is unpredictable and has no effect on how the market behaves. They also believe that the chart patterns that the technicians produce is pure chance, therefore the random theorist trades on any market playing the market solely like a casino.

1.6 Advantages and Disadvantages of investing

Duet to the unpredictability of the stock market it is difficult to have a perfect market situation with the fundamentalists or the technicians. Although these might favor the Random theorists but believing that playing the stock market as a game of chance is not having something to lean on when there is a disaster and it is important that you know it so it doesn't repeat itself in the future.

Of course it helps to have average that can accurately predict the market behavior for bull and bear situations. One of the disadvantages of Dow Theory for technical advantages is that it gives you an average of the general market, and Dow and Hamilton did not create the theory with individual stocks in mind. And as observed from averages some individual stocks could be high and some could be low, without understanding the highs and low would make almost useless the theory for any individual investment.

The reports from companies stocks can be used to give the averages and helps the fundamentalist investors to where he can likely earn profit. But if the profit of the company's average was earning profit was wrongly listed, such as the 2001 and ongoing case of ENRON that is now bankrupt, the investors or fundamentalist will be deceived and thereby calculate a wrong

P/E (profit earning ratio) that shows a high ratio and a potential buy that ends up in a potential loss.

Other problems with the Technical analysis will be the case that the Dow Theory does not account for natural disaster and in a situation where there is a disaster such as Katrina, investors panic and watch which could invoke downward secondary or primary trend depending on how the disaster is handled.

Finally for the purpose of our research we will be employing fundamental analysis for long term trade, and fundamental and technical analysis for short term trade, if at the end the result wasn’t profitable enough with all the theories especially in the short term trade then it should be conclusive that the Random theorist view is the most acceptable given the time period (6 weeks and 1 day) for our trade and analysis.

Chapter 2: Fixed income investments

2.0 Bond Basics

In the ranging effects of the uncertainty of the stock market that includes bull and bearing sequences, so many investors enjoy the bull period but could end up loosing significant amount of assets in a bear market. This brings the question of fixed income securities known as bonds issued by government and corporations to build their industries because big corporations and government don't get enough money from banks and stocks they result in selling bond securities. Bonds are securities issued by the government or companies to borrow money from investors that results in interest to the investors known as coupon at a maturity date, the date the investor is expected to be paid the full value of the money.

Unlike the buying stocks as equities that has a lot of baggage of uncertainties of bear and bull market; bonds are safe in the guarantee that you the investor will get your money back at the maturity date. The par value is what the investor receives when the bond is fully matured, through out the live of the bond it fluctuates and this can also affect the par value. When the bond is at a value of more than what is purchased is known as premium and when it is less it is known as discount. Yield is another important concept of bonds as it relates to the price and the interest, when the price goes up the yield goes down and vice versa. Yield is a calculation based on the coupon per price (coupon/price) that is affected by the general market interest rate if you want to trade your bond. When the interest rates of the market goes up the yield goes up making the price cheaper, newer bonds can compete with your bond because they already have high yields but you will be loosing money if you choose to sell because you but your bond at a higher price but now the price is down.

There are different types of bonds such as Zero coupon bonds, Municipal bonds, Basic Bonds, HH savings bonds, Junk bonds, EE savings bonds, corporate bonds, Bonds funds, and convertible bonds which will be discussed in the following sections. One of the standing difference with the bonds are the once issued by the government and the ones issued by corporations as the government bonds are the safest since it is certain the government will never get bankrupt but corporations can. One of the catches are in the yields that the corporations provide, a safer corporation gives lesser yield than a struggling corporations because the prices for the struggling corporation’s bonds are usually low and they are buying for investors by giving higher coupons to present higher yields. That’s also why in general that government bonds presents lesser yield and are more reliable. Finally you can purchase bonds through bond brokers and your banks and if you want to purchase government bonds without the hassle of brokers and interests you can find them at http://www.treasurydirect.gov

2.1 Corporate bonds

Corporate bonds are those bonds issued by companies; they have a significant high risk than all fixed-income securities, government or supranational bonds because companies, even stable, large one, are much more susceptible than governments to economic problem, mismanagement and competition. The upside is that the bondholder can also be the most rewarding in these fix-income investments because the risk of the investor must take on to gain any profit. The company’s credit quality is very important because the higher the quality the lower the interest rate the bondholder receives or the lower the company’s credit quality, the higher interest rate the investor is paid. Corporate bonds can be used by institutional and individual investor. Institutional investors are banks, endowments, mutual fund, pension fund, and insurance companies. Individual investors are very wealthy individuals. Corporate bonds come in three maturities:

- Short term: one to five years
- Intermediate term: five to 12 or 15 years
- Long term: longer than 12 or 15 years

Standard & Poor’s and Moody’s are known as the two major debt-rating agencies, they monitor the credit quality of companies and governments and assign credit ratings based on the entity's perceived ability to pay its debts over time.

The problem with corporate bonds compared to the government bonds is that they have higher yields which amounts from higher interest or coupon, the higher the yield the higher the risk of the company because they are selling for lower price and it could only get lower if the interest rises putting the investor at a loss. Another difference with the government bonds will include taxes most government bonds such as the municipal are tax-exempt bonds and will save the investor money on interest.

2.2 Bonds funds

Bond funds are also called fixed income funds. A bond fund or income fund describes a mutual fund that invests primarily in bonds or other debt securities. Since the bond market behaves differently than the stock market, bond funds usually used to balance a portfolio. With the diversity, the risk you have to take lower significantly. Bond funds are also very important if you are close to retirement because they are used to create regular income.

Bond funds come in different categories:

- Municipal Bond Funds -uses tax-exempt bonds issued by state and local governments (these funds are non-taxable).

- Corporate Bond Funds -uses the debt obligations of U.S. corporations.

- Mortgage-Backed Securities Funds - uses securities representing residential mortgages.

- U.S. Government Bond Funds -uses U.S. treasury or government securities.

Maturity rate is another way bond funds are categorized:

- Short-term Bond Funds –usually means the holdings have up to two years left to maturity. This includes bills, CDs, and commercial paper.

- Intermediate-term Bond Funds –usually means the holdings have between two years to ten years until maturity.

- Long-term Bond Funds –usually means the holdings have over ten years left to maturity.

2.3 Convertible bonds

Convertible Bonds are fixed-income securities and are part of corporate bonds. They give the bondholders the right to exchange or "convert" the par amount of the bond of the issuer at some fixed ratio during a particular period for common shares a specified price such as common stock, conversion ratio or another security. The value of convertible bonds depends on the level of current interest rates and the company's credit quality.

As bonds, they have a coupon payment and are legally considered debt securities in the event of default. Convertible bonds tend to pay lower interest rates than ordinary corporate bonds.

Convertibles can be used to diverse a portfolio. The bond's value is affected by the share price of stock and also affected by changing in interest rates.

2.4 HH savings bonds

Series H bonds were first offered on June 1, 1952, as a companion series for investors who preferred to receive current income. Series H bonds were withdrawn from sale as of December 31, 1979. They were replaced by Series HH bonds.

Series H bonds are current income bonds, issued at par. Series H interest is taxable for the year in which it is received. Series H bonds were issued in denominations of $500, $1,000, $5,000, and $10,000. Series H bonds may be redeemed by Federal Reserve Banks and are worth face value.

Series H bonds issued from June 1952 to January 1957 had an original maturity period of 9 years, 8 months. Those issued from February 1957 to December 1979 had a 10-year original maturity period. All Series H bonds have been granted two 10-year extended maturity periods

When an HH Series bond is issued, you pay the face amount for the HH bond and interest is paid each six months, providing you with “current income.” The interest payments on HH bonds are made by direct deposit to your checking or savings account at a financial institution

You can purchase Series HH bonds, but only in exchange for Series EE or E bonds and Savings Notes, or with the proceeds from a matured Series HH bond. Unlike EE bonds, Series HH bonds are purchased at their face amount in $500 to $10,000 denominations, but there is no limit on the amount you can purchase. These bonds don’t increase in value and have a maturity of 20 years which is not always a good advantage for short term investors.

2.5 Junk bonds

These are bonds that involves greater than usual risk as an investment and pays a relatively high rate of interest, typically issued by a company lacking an established earnings history or having a questionable credit history. Junk bonds became a common means for raising business capital in the 1980s, when they were used to help finance the purchase of companies, especially by leveraged buyouts; the sale of junk bonds continued to be used in the 1990s to generate capital.

Junk bonds are used by companies that are struggling financially and in capital; they are cheap in price and high in coupon and interest rates raising the yield. A higher yield for a company that is not getting better can hurt the investor because if the company decides to go bankrupt or and the price keeps getting lower, the investor in the secondary market will have to sell his bonds on a lesser money than he bought it or run the risk of loosing everything entirely with bankruptcy.

2.6 EE savings bonds

Series E bonds were first issued in May 1941. They played a major role in financing World War II and continued as a stable method of debt financing. Series E bonds were withdrawn from sale as of June 30, 1980. They were replaced by Series EE bonds.

Series E bonds are accrual bonds which were issued at 75 percent of face amount. Series E bonds were issued in denominations of $10, $25, $50, $75, $100, $200, $500, $1,000, $10,000, and $100,000.

Interest is paid at redemption as part of the current redemption value. Series E bonds may be redeemed by many financial institutions and by Treasury Retail Securities Sites.

Series E interest is reportable for Federal income tax purposes for the year in which the Series E bonds are redeemed, reach final maturity, or are otherwise disposed of, whichever occurs earliest; alternatively, a bond owner may elect to report Series E interest as it amounts up. P

Series E bonds have had varying original maturity periods depending on their issue dates, ranging from 10 years for the oldest bonds to 5 years for the last ones issued. Series E bonds issued from May 1941 to November 1965 have been granted three 10-year extended maturity periods. Those issued after November 1965 have been granted two 10-year extended maturity periods. Series E bonds issued from May 1952 through November 1965 have been granted an additional extension sufficient in length to make their total interest-accruing life spans 40 years. Those issued in December 1965 and after have been granted an additional extension sufficient to make their total interest-accruing life spans 30 years.

Series EE Bonds These savings bonds replaced the Series E bonds. They are purchased at a discount of half their face value in $50 to $10,000 denominations, but you cannot buy more than $30,000 (face value) during any calendar year. EE saving bonds increase in value as the interest accumulates and pay interest for maturity at 30 years. When EE bonds "mature," or come due, you are paid your original investment plus all of the interest.

2.7 Zero coupon bonds

Zero coupon bond as the name sounds has no coupon attached to it therefore there is no interest paid to the bond during its lifespan. At maturity the investor will receive the amount from the initial investment and any interest that has amounted from the time of the investment. Zero coupon bonds have a long term longevity that includes ten to fifteen or more years, investors interested in this kind of bond are usually interested in their child's college education, retirement etc. The interests in the bonds are paid during maturity because of that the interest are taxed by the government but investors can get it tax exempted by getting the municipal zero coupon bonds.

2.8 Municipal bonds

Municipal bonds are securities given by local government, county, state government, and federal government for projects that include highways, schools, sewer systems, military etc. After you buy the bond the government promises to return your money with interest in the form of coupon rates and yields at a specific date of maturity agreed upon by the investor and the issuer. However not all municipal bonds can give you an income tax exempt from local or state government, they are usually free from federal government taxes and to be free from state or local government will depend on the state that the tax is issued. Municipal bonds are issued in the short term and the long term, the short term is a period of 1 year usually known as notes while the long term is for a period of more than 1 year that are called bonds. There are two types of Municipal bonds known as general obligation bonds and Revenue bonds. The general obligation bonds is a bond on the basis of the issuers credit and how good they are in taxing, while the Revenue bonds are built on the basis of the projects that includes, schools, highway, houses, and the rent or revenue generated from this projects are used to pay the investors.

Municipal bonds as most bonds given by the government offer attractive rewards that include safety that you will get your money back in the form of principal with interest, these days that most corporations are unstable you can always count on the federal government that they will always be there. Further advantages could be seen when you compare the yields to corporate bonds that are taxable, for example a 5% yield from a government tax-exempt bond compared to a 7% yield taxable corporate bond from a $30,000 income will give a gain of $1500 for with the municipal bond compared to $1407 from the taxable corporate bond at a higher yield. One use of tax exempt bonds like municipal bond is to gain capital as reported however if the bond is held longer than 12months it could be taxes for up to 15% as reported after May 6, 2003. In addition selling your bond in a security market before maturity will be subject to the market price that might be more or less than the price you bought the bond for, the bonds a traded by security dealers licensed in municipal securities.

One of the problems of municipal bonds and other bonds is if the interest rates gets higher and you want to get your yields annually or willing to invest, this could cost a lot of money. One of the things investors should do with this kind of bond is to wait until it reaches maturity so that he/she could receive the full interest. Investors should also be aware of their issuers by checking their bank statements from brokers, their banks and also should check the issuer’s credit rating from places like the Standard & Poor’s and Fitch ratings. A rating of AAA from S & P and Fitch including a rating of Aaa from Moody’s investors shows an excellent rating for the bond anything lower will be medium from upper medium to a default rating.

Aaa	AAA	Investment	Highest Quality
Aa	AA	Investment	High Quality
A	A	Investment	Strong
Baa	BBB	Investment	Medium Grade
Ba, B	BB, B	Junk	Speculative
Caa/Ca/C	CCC/CC/C	Junk	Highly Speculative
C	D	Junk	In Default

Table 1 - Stock Rating

Chapter 3: Short term investment trends

3.0 Introduction

In the ever unpredictable behavior of the stock market it is important to know where you stand when you invest. That has been the primary focus of our research in this IQP that is to utilize theoretical methods such as technical analysis and fundamental analysis in investing. Thereby in our first 3 short term trading weeks we looked for trends that are affected by value in the fundamentalist approach and demand/supply in the technical analysis approach.

One of the things we looked for while trading with short term market trend for the short term market trading is really the technical analyst method. Since the technical analyst uses the fundamentalist approach for looking for value before involving in a stock was the first thing we did before we selected a particular stock.

First we traded in market that uses penny stocks, penny stocks in our experiment are the stocks that are under $5.00. Penny stocks are offered by companies that are either struggling or new companies that want the support of investors with the potential of moving forward. These are very attractive stocks to any investors with high risk and high reward written all over it. It has potential for high rewards from a new company such as pharmaceutical, biomedical and other technology departments with attractive products to consumers and has a high risk if the product doesn’t do well in the consumer market. Other risk will be in a company on a downward slide, you never know if they’ll ever go back up and are just using the penny stocks as a bail out. That’s also why as students of technical analysis is important to look for value in the stock like checking the P/E ratio and look at the past earning and how it behaved before considering the stock. Even with the high risk there is also great potential for high rewards because of the volatility and fluctuations of these kinds of stocks, there is potential to make money here compared to more stable stocks and since we are in a bull market period it makes investing in penny or low priced stocks even better.

Moreover, we are in a bull market period and as long as we remain in the bull market any other market behavior is really in the secondary behavior of the market except we fall to a bear market. Thereby combating issues that might arise from an upward and downward trend in a secondary trend will involve us to look at the demand and supply of the product in the market. Because of the unpredictability of investors sometimes towards stocks we diversified our portfolios to not only include penny stocks but other stocks in demand with the potential of giving us gain in our short term trading season.

3.1 Market simulation

One of our strategies for investment student of technical analysis is utilize days that people are more flexible to buy and sell to dictate that market, these days include holidays that’s why we used the memorial day weekend to do most of our buying and selling right after the holiday. The first company we invested in as part of our low-priced stocks was conexant systems part of our valued technology companies. Conexant systems designs and distributes semiconductors around the world that are useful in applications such as video games, camcoders, internet, telephone and any system that is digital oriented. They pulled off a P/E ratio of 15.05 for a period of 1 yr and were on up trend when we bought their stock on 05/22/06. However the technical analysis graph of market trend below a significant rise from the beginning of this year and the past has also showed a bull behavior. Therefore, we invested at a $25000 at a share price of 3.97 purchasing about 7886 worth of stocks.

Figure 2 - CONEXANT SYSTEMS

The second company in our short term trading is Sun Microsystems; this is an information technology company that provides infrastructures solutions that includes support, storage, professional and knowledge services. In this growing age of information technology a lot of companies are having trouble storing the information of their customers such as cell phone (almost everyone has one these days), this is where the demand of these kind of company comes in play and in a series of holidays they can be of a support as the growth of information technology directly ties to them. Also looking at the trend below, it has been on an upward trend up till May but from the past this stock has the potential of shooting back up. We invested at a $25000 at a share price of 4.53 purchasing about 5519 worth of stocks.

Figure 3 - SUN MICROSYS INC.

The third of our short term stock was DECTRON international; this company is involved in developing and manufacturing standard to custom design heating, ventilation and air conditioning products and services to build systems, food processing, petrochemical, and various industrial commercial markets. One of the features that attracted us to this stock is its versatility; it is a technology company that also involves itself with petroleum and food products, materials that are always in demand and supply. With the trend below you can tell the constancy in the stocks, this presented us with the probability to make a little profit if our other market decision fails.   We invested at a $24937 at a share price of 4.95 purchasing about 5038 worth of stocks.

Figure 4 - DECTRON INTERNATIONALE INC.

Our fourth company is Internap network svc cp, they are an Internet service provider to other companies and businesses that need connectivity, video and sound streaming, and voice over IP. They also manage security services and pre/post service installation and consulting. One thing attractive with this company is its services and supports over the internet and private security of networks something that is always in demand by big companies to help protect data of their big businesses. Also looking at technical analysis trend below they have been on a rise since March of 2006 which could have been a result of the company growing internationally providing services all over the world to countries that including Europe, Asia, Australia etc, it looks better for this company. We invested at a $24921.14 at a share price of 1.17 purchasing about 21300 worth of stocks.

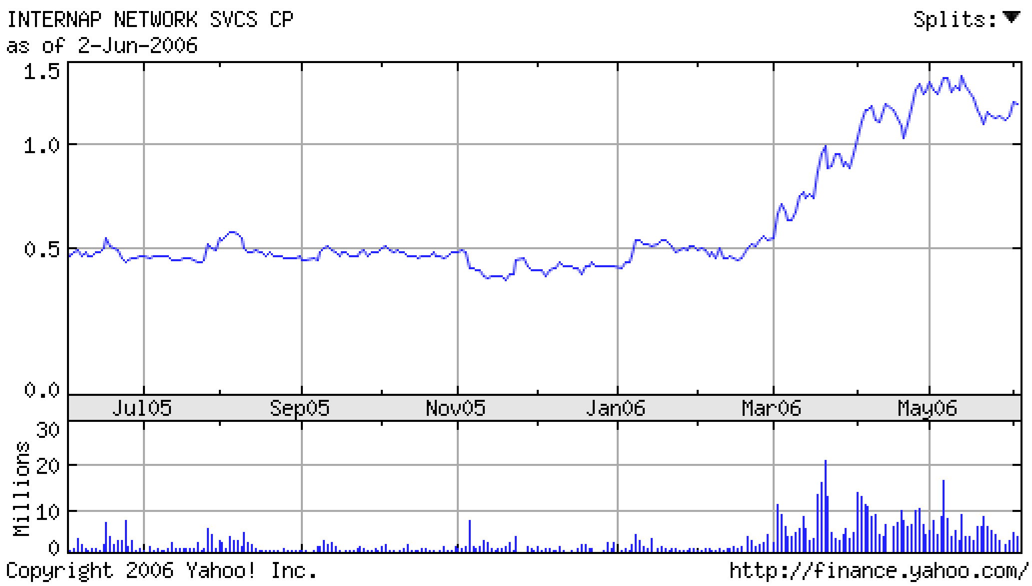

Figure 5 - INTERNAP NETWORK SVCS CP

Our fifth company is Charter communications; they provide broadband communications around the United States. And as citizens of Worcester we know are alert that most of our homes own a charter cable box, even though they don't provide the best services they are still reliable to be owned in so many homes. In a period of March 06 in the technical analysis market trend showed a bearing point there was a downward trend before that low. However, as students of technical analysis after that low it has been climbing with series of secondary trend, with the bull of the primary market in place chances are it can get back to its highest high of 1.7 or higher (one year period on September of '05). With this analysis, we invested at a $25055.19 at a share price of 1.09 purchasing about 22986 worth of stocks.

Figure 6 - CHARTER COMMUNICATION INC.

Our Sixth Company is Northgate Minerals, this company has ownership in corporations that produce and involve in the exploration of gold and copper properties in North and South America. The attractive thing about this company is that it started since 1948 and it from the yearly market trend shown below they are on an upward trend move from the period of November of 2005 which could only get better as investors continue to buy in this bull market period. We invested at a $27790.70 at a share price of 3.34 purchasing about 8321 worth of stocks.

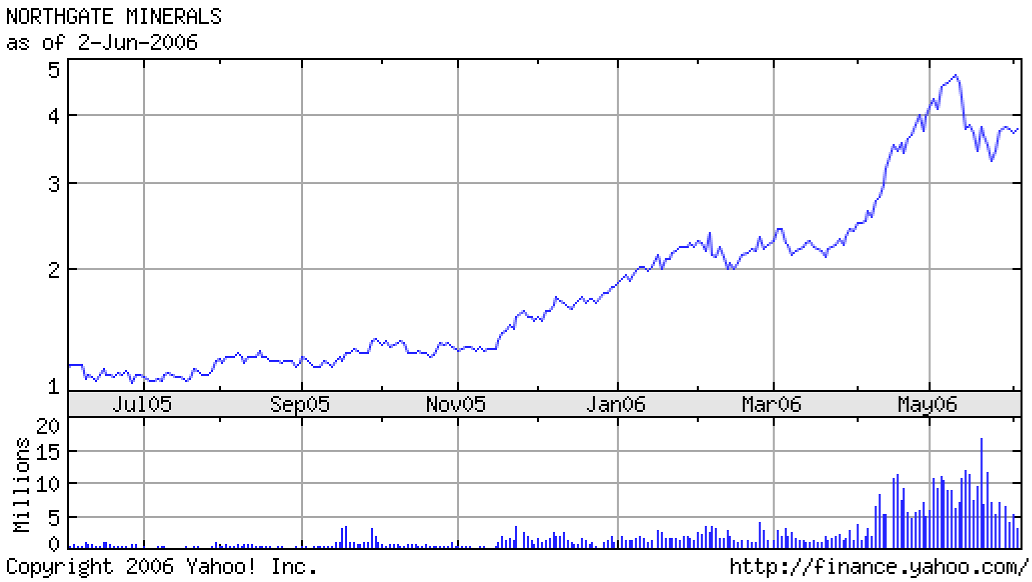

Figure 7 - NORTHGATE MINERALS INC.

Our Seventh company of this short term investment experiment is ENCYSIVE pharmaceutical, this company is involved in research, development, and commercialization of novel, synthetic, and small compounds that are used in treatment and prevention of interrelated diseases of vascular endothelium. From the technical analysis graph this company has been on a downward trend and has been bearing for 1yr and using Dow's theory, in a cyclic way this company has the potential of rising back up especially in a primary bull market season, this was simply a gamble with Dow theory to hope for the best. We invested at a $26448.36 at a share price of 4.48 purchasing about 5904 worth of stocks.

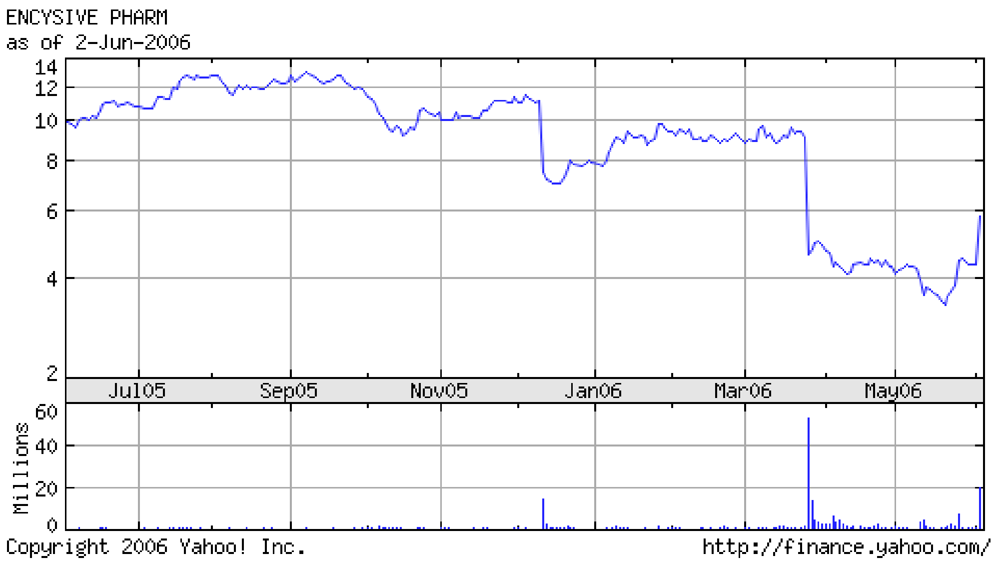

Figure 8 – ENCYSIVE PHARMACEURICALS INC.

The Eighth Company in our short term experiment is JDS uniphase CP, they are involved in telecommunications, and they provide, tests, measurements solutions, and optical products for telecommunication providers. Since telecommunication has been a technological field that has always been there, with growing technology telecommunication providers always are shooting to provide better products to their companies that’s where the demand of this company comes to play. From the market trend below it has been showing an upward trend since September of 2005. We invested at a $24708.13 at a share price of 3 purchasing about 8236 worth of stocks.

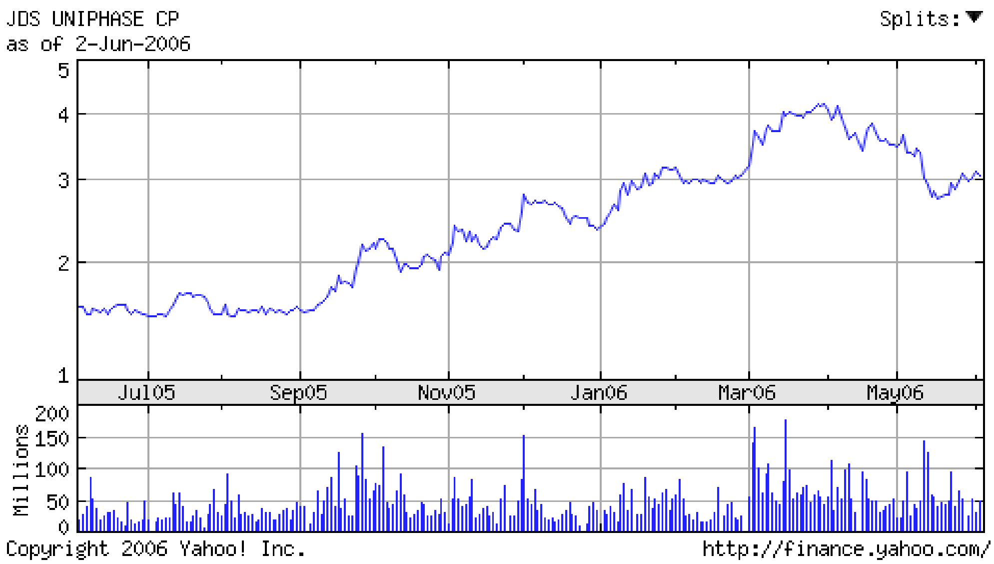

Figure 9 - JDS UNIPHASE CP

Finsar cp is another company we invested in for our short term experiment. Finsar is another potentially gifted company in demand and supply, they design, manufacture, and market fiber optic systems and components, network performance and monitoring systems, there products are used in high speed local area networks (LAN), storage area networks (SAN), metropolitan area networks (MAN). This is another company that will always improve whenever there is a need to improve the technology in these networks as the demand grows and customers expand. From the technical analysis graph below you can also see the growing upward trend from September of 2005, however it has been somewhat consistent since March of 2006 but that’s something that can still improve. We invested at a $27457.87 at a share price of 4.6 purchasing about 5969 worth of stocks.

Figure 10 - FINISAR CORP.

Another technological company with potential for our short term trading is ACE*COMM corporation. They provide suite of telecommunications network business integration products and services that helps telecommunication carriers and enterprises exercise control the operations of their networks. This company was on an upward trend from November 2005 to February of 2006, it is currently on a downward trend but the way the stock fluctuates it will get back up and that is what we are counting on in investing in this company. We invested at a $26684.51 at a share price of 2.6 purchasing about 10263 worth of stocks.

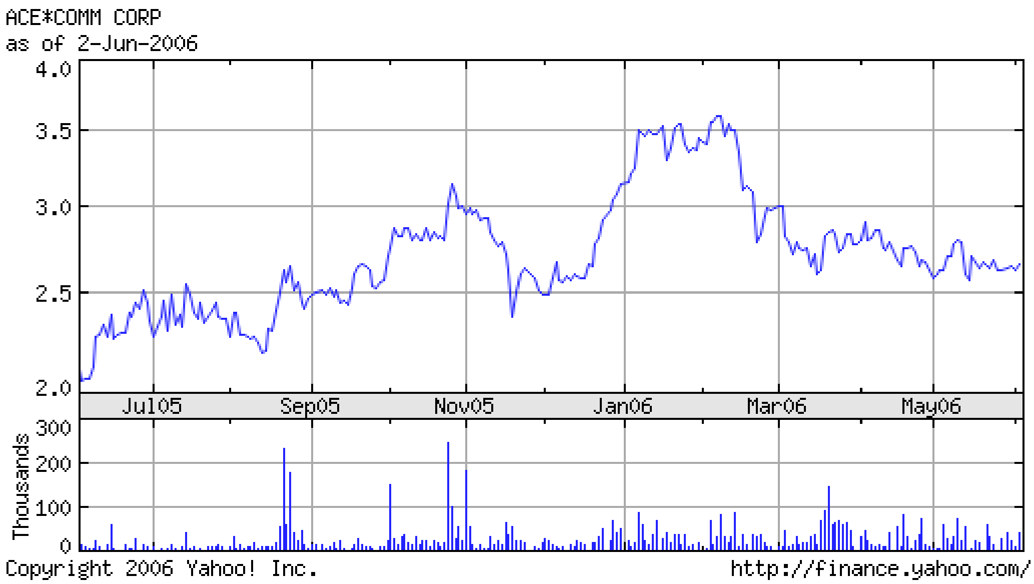

Figure 11- ACE*COMM CORP

3.2 Market behavior

Date - 2006	Symb	Buy Price	share	Cost	Sell Price	Proceeds	Profit /Loss
6-May	SIRI	3.97	6297	25004.09	3.96	24936.1	-67.97
	CNXT	3.17	7886	25003.62	3.16	24919.8	-86.31
	SUNW	4.53	5519	25006.07	4.54	25056.3	51.06
	ATML	4.3	5814	25005.2	4.78	27790.9	2849.8
6-May	DECT	4.95	5040	24941.12	5.25	26460	1535.24
	IIP	1.17	21307	24924.76	1.16	24716.1	-345.14
	CHTR	1.09	22997	25061.26	1.08	24836.8	-2959.16
	NXG	3.34	8324	27795.92	3.3	27469.2	1004.2
6-May	ENCY	4.48	5908	26465	4.52	26704.2	1983.04
	JDSU	3	8242	24721.12	3.07	25302.9	461.18
	DGSE	2.5	9939	24841.76	2.6	25841.4	-1632.8
	FNSR	4.6	5973	27474.2	4.64	27714.7	1005.56
6-Jun	ACEC	2.6	10275	26709.16	2.62	26920.5	1612.56
	ACEL	2.39	10591	25307.94	2.34	24782.9	-1063.46
	BCON	1.28	20195	25846.4	1.32	26657.4	-1062.32
	CALD	5.2	5332	27719.72	5.25	27993	1067.5
6-Jun	ACEC	2.52	10686	26925.5	2.66	28424.8	3636.82
	ACEL	2.4	10331	24787.94	2.87	29650	2987.57
	BCON	1.35	19754	26662.4	1.35	26667.9	-1330.1
	CENF	1.83	15302	27998	1.85	28308.7	310.7

Table 2 - Short-term Stock Simulation

One of the most important observations in the market behavior is how we have used technical analysis for significant gain using low priced technological stocks. Obviously trading in a primary bull market period has given us a distinct advantage but also trading at a period of consumer demands that is the memorial day weekend was also to be accounted for our success. From the period of March to May 2006 most of the market has been on an upward trend from the technical analysis charts discussed in the previous section with minor downtrends due to secondary fluctuations in the market.

We have recorded losses in IIP, Charter communications, Northgate Minerals, Sirius Satellite radio, Conexant and Alfacell Corporation. While most of the losses are understandable due to secondary fluctuations of the stocks in a bull market, the one that is a clear loss is the stock from charter communications. From the month of September of 2005, charter has been on a downward trend hitting a lowest low in the month of March 2006; it did shoot upwards after that with a series of secondary upward trend. We gambled here with the feeling that it will sometime climb back up according to Dows' theory, also giving these analysis was only for periods of weeks in our experiment, this stock still has the potential of rising back up and reaching it’s bull potential. We have gained a significant amount of about $12881.05 from all our trades.

3.3 Conclusion

The rest of our gains have been expected in this kind of market and with the diversity of our trading scheme we were able to restore our losses to recover a total gain of about $12881.05. In all we have exploited the market behavior using technical analysis that involved technological stocks in demand and supply with the potential of growing to systematically trade our stocks to reap us some significant profit. There have been some losses along the way due to the secondary behaviors of a bull market and some losses that were well expected because we expected an upward trend from a bearing stock. It has been an experience that has made us understand the market and how flexible we should be especially in a short term trading environment.

Chapter 4: Investigating brokage companies

4.0 Merrill lynch , Charles Schwab, TD Waterhouse

In this age of internet technology to online investment, it is important to know how to invest, what to invest, whom to invest, this is where the importance of broker companies come in to help ignorant investors to understand the market. TD waterhouse began in 1999 and is a growing broker company today with about 2500 investment advisors using their services, free discount portfolio management, commissions are also as low as about $12.00 per month. They have about 230 branches worldwide include all the 50 states of the United States and their services are also 24hours a day seven days a week respectively. Its main market is also in the US and Canada producing about 66% and 29% respectively in the 2000 fiscal year. In the winter of 2000 Forrester research listed them as the top online broker company.

Merrill Lynch (ML) is one of the leading financial management and advisory companies of the world. Merrill Lynch is a stock brokerage and investment banking. The base of Merrill Lynch is in New York City, and occupied the entire thirty four stories of the Four World Financial Center building in Manhattan. ML has offices in thirty six countries. The company was founded in January 1914 by Charles E. Merrill. Their businesses include a range of services for financial intermediaries, institutions and corporations, small businesses and private clients. These services divided into three main core businesses which are Merrill Lynch Investment Managers, Global Markets and Investment Banking Group and Global Private Client.

The Global Private Client (GPC) Group offers investment advisory, broking and depository services to cover the financial needs of their clients such as insurances, banking and retirement services for individuals and businesses. GPC also provides solutions and advice in the following areas: professional money management, wealth protection, market intelligence, banking services, cross border solutions, and tracking progress around the world.

Global Markets and Investment Banking Group (GMI) is one of the world’s top global investment banks. Its products and services include providing institutional sales and trading, investment banking advisory and capital raising services to corporations, governments and institutions worldwide. GMI is also a leader in the global origination and distribution of fixed income products and provides clients with financing, securities clearing, and settlement and custody services.

Merrill Lynch Investment Managers is an asset management firm. MLIM was recently merged with BlackRock to create a new independent company. The new company will be operated under the BlackRock name. This merger will create one of the world largest asset management firms with nearly $1 trillion in assets management. The transaction for this merger will be completed in the third quarter of 2006. BlackRock products and services include: Investment Trusts, Mutual & Variable Insurance Funds, Offshore Sterling Trust Funds, Pension Funds, Institutional Products, Alternative Investments, Managed Accounts, and Unit Trusts, ISAs & PEPs.

The Charles Schwab Corporation is one of the nation's largest financial services firms. The subsidized smaller companies such as Charles Schwab & Co Inc, Charles Schwab Bank N.A, U.S. Trust Corporation and CyberTrader, Inc provide securities brokerage, banking, wealth management and related financial services for almost 7 million clients.

This firm was founded by Charles R. Schwab thirty years ago to help individual investors take control of their finances by offering them discounted smaller brokerage fees. His vision was to provide the most useful and ethical financial services in the world which lead to the ultimate growth of the company.

Following are the services offered by Charles Schwab & Co, Inc in the investment area. They are – Stocks, Mutual Funds, Exchange-Traded Funds, Bonds and Margin loans.

One of the leading papers Barron’s has given rating the Schwab’s Equity rating method.

“Barron’s has ranked a model portfolio based on Schwab Equity Ratings® #1 for five-year performance. Schwab Equity Ratings is our proprietary methodology for identifying stocks that we believe will outperform or underperform the market over the next 12 months.”

Some theoretical data is given by the company to prove that by following the Schwab’s equity rating data, we can safely invest and be able to gain marginal amounts of profit from the stock market rather than just invest and watch the market trends on a daily basis.

“On average, returns of all stocks rated A by Schwab Equity Ratings have doubled those of the S&P 500® Index since inception. As an example, an investment of $100,000 in all stocks with Schwab Equity Ratings of A, could have earned $18,700 more than the return of the S&P 500 Index.”

4.1 Rates

TD Waterhouse participates in the trading of fixed income investments that includes corporate, municipal, treasury, and other government bonds by licensed brokers. Virtual or domestic stocks traded on an exchange or over the counter the online trades are $9.99. They offer more than 13000 mutual funds including index and other funds. You can also use their mutual fund screener to select the mutual funds you are interested in.

They also have online trading tools that make it easier for customers with their account to make smarter decisions on their trading options. Their special offers includes 50 free trades and $100 for customers opening or funding an account of up to $50000, 25 free trades and $50 for customers opening or funding an account of up to $25000, 15 free trades for customers opening or funding an account of up to $2000.

Shwab employs a rating method for about 3000 companies that includes using a scale of "A," "B," "C," "D," and "F".

Charles Schwab & Co.("Schwab") rates stocks "A" to "F." On the Schwab's scale an "A" rated stock, on average, will strongly outperform and "F" rated stock, on average, will strongly under perform the equities market over the next 12 months. Schwab

Equity Ratings are based upon a disciplined, systematic approach that evaluates each stock on the basis of a wide variety of investment criteria from four broad categories: Fundamentals, Valuation, Momentum and Risk. This approach attempts to gauge investor expectations since stock prices tend to move in the same direction as changes in investor expectations. Stocks with low and potentially improving investor expectations tend to receive the best Schwab Equity Ratings ("A" or "B" ratings), while stocks with high and potentially falling investor expectations tend to receive the worst Schwab Equity Ratings ("D" or "F" ratings). From time to time, Schwab may update the Schwab Equity Ratings methodology.

"A" Rating (Strongly Outperform): If an investor is looking to add a stock to his or her portfolio, "A" rated stocks may be the best candidates for consideration.

"B" Rating (Outperform): An investor looking to add a stock to his or her portfolio should also consider a "B" rated stock, though preference should be given to "A" rated stocks.

"C" Rating (Marketperform): An investor would not usually consider a "C" rated stock for purchase. An investor that has a "C" rated stock in his or her portfolio should consider continuing to hold the stock, and might monitor the stock's ongoing performance and compare the potential benefits of owning a stock with higher ratings.

"D" Rating (Underperform): An investor holding a "D" rated stock should consider whether it is appropriate to continue to hold that stock in his or her portfolio. An investor would not usually consider a "D" rated stock for purchase.

"F" Rating (Strongly Underperform) An investor holding an "F" rated stock should consider whether it is appropriate to eliminate that stock from his or her portfolio. An investor would not usually consider an "F" rated stock for purchase.

Schwab Equity Rating	Percentile Ranking Distribution	Schwab Equity Rating Distribution	12 Month Return Outlook	General Buy/Hold/Sell Guidance[1]
A	1-5	Top 5%	Strongly Outperform	Buy
B	6-30	Next 25%	Outperform	Buy
C	31-70	Next 40%	Marketperform	Hold
D	71-95	Next 25%	Underperform	Sell
F	96-100	Bottom 5%	Strongly Underperform	Sell

Table 3 - Rating "A" to "F"

4.4 Advantages and disadvantages

The advantages of broker companies that is common with most online trading companies is not only the low rates such as the $12.00 per trade in the TD waterhouse but you can trade with just a few clicks with real quotes. The rates compared to phone payment by brokers is more expensive about $35.00 by some brokers. They help keep customers organized with their portfolio such as the rating system employed by the Charles Schwab that rates each stock from A to F, A and B are keeps while C is watch critically, E and F are sell stocks. They also alert the customers on new stocks with values and when to trade, all these comes very handy to short term investors that are active with their portfolio and don’t want to mistakenly miss to buy or sell. It also helps new investors by easing them into the market via ranked stocks, which at the end aids them not to theoretically loose a lot of money.

Bond laddering is a strategy that can help minimize exposure to interest rate fluctuations. Instead of buying bonds that are scheduled to come due during the same year, investors purchase bonds that mature at staggered future dates. Example: Say you invest $20,000 each in a one-year, two-year, and three-year bond paying 5 percent, 5.25 percent, and 5.5 percent, respectively. At the end of the first year, you invest the proceeds from your 5 percent bond and buy a 5.5 percent bond, which matures in three years. Because you are able to invest a portion of your money each year, you are less exposed to interest rate fluctuations.

With the advantages also comes the disadvantage of these broker companies, one of them is the kinds of illegal practices that they employ with the advisors of other brokerage companies that can cost customers to loose money. For example, In 2000 TD waterhouse reportedly made payments to three investment advisory firms as an incentive for the advisor’s brokerage business, the advisors include Kiely Financial, Rudney Associates, and BKS, they received $49500, $20000, $7500 respectively, these are all violations of federal security laws. The problem was that it went against the advisor’s client conflict of interest, the client has the right to know that he/she is getting the best service and not biased by some sort of big company middleman that is benefiting from the interest in the client’s portfolio. Even more that the client needs the security that he/she’s advisor is loyal and is not playing some game at the back to loose some interest.

The Risk grade underlying the Schwab Equity Rating is based upon diverse measures of investment risk. Larger stocks with attributes such as stable sales growth tend to have better Risk grades. Highly rated stocks with such grades may have the potential for price appreciation, as investors perceive these companies to offer an attractive risk vs. return trade-off.

Any stock selection discipline has its limitations. Given that systematic stock selection approaches cannot capture all the dynamics that affect individual stock returns, Schwab Equity Ratings may not capture more subjective, qualitative influences on return and risk such as management changes and pending lawsuits. Furthermore, the ratings may not reflect the possible impact of late-breaking news. Thus, it is important to conduct additional research prior to making a trading decision.

Finally, a disadvantage with broker companies is competence of the advisors. The stock market is always changing, and the brokers are paid to understand the changing situation to give clients valued analysis that will help their portfolio. However, not all the brokers are that competent and clients can run into these kinds of advisors that could cause profitable loss. This is why the client has to know the overall profit of any of the brokers if they choose to invest with them.

With all these disadvantages, Broker companies can still be a valuable mode of investment for novices and short term or active traders by leaving the burden of all the analysis to the broker and the kind of support provided by their advisors. Consumers can also take advantages of their services that include online help tools, stocks, and fixed income investment, from 2001 quarter they have been recording significant profits, this can help potential investors to help with any doubts larking around investing with broker companies.

Chapter 5: Long term investment trends

5.0 Introduction

In the world of investment the final goal is to earn significant profit that outweighs losses. This is where your strategy for investment comes to play, we have done investigations and investments in the past that include short term trading and bonds, in this chapter we will be investing using long term methods. In the event of a long term trade we will be investing in stocks on a long term basis on a potential company that has value in period of months to years before we trade.

How do we find value in a stock? There are several factors that we use to determine the value of a long term stock. One of the factors include the market trend until that period such as how the market reacts during bear and bull market, does it maintain some secondary upward trend during a bear market which is a good indication to sell so that you don't loose enough money or does it also have more upward trends in a bull market period that will undermine any other secondary downward trend during this period.

Trends are one thing, another thing we look for in a long term stock is similar to what the technical analyst will check in the stock that includes its potentials in the future with demands and supply. As we know that they are some companies that have economic values that could impact the market for long-long time such as the gas companies, gas is what runs the transportation industry around the world and this market will be around for a while, everything about this companies speaks out from there history. Other values we look for when we evaluate demand and supply in long term companies is the potentials in new companies. Every big company started somewhere it is important to know how to find these companies with potentials and investing with them. One of the good things with this kind of companies is that there stocks are in penny stocks going from $1 to $5.00. Moreover, in the growing age of technology and how they affect the economy and the society, finding new technology companies with penny stocks and monitoring them on a long term bases can be fruitful in the long run.

Finally, due to the projection of our project that is for 7 weeks, we will only be evaluating our stocks for this period of time. The long-term stocks that we are presently monitoring includes, Exxon mobile (XOM), Honda Motor Corporation (HMC), Boeing company (BA), and General electric company (GE).

5.1 Market simulation

The first company we analyzed in our investment is Exxon Mobile (XOM). It was founded in 1870 which presents it with a lot of history and it's also one of the competitors in the petroleum industry around the world. Exxon participates in the exploration, transportation, manufacture and production of crude oil and natural gases. The countries they operate around the world includes the United States, Canada, Europe, Africa, Asia-Pacific, Middle East, Russia/Caspian region, and South America, which they also apply electric power generation as part of there business overseas.

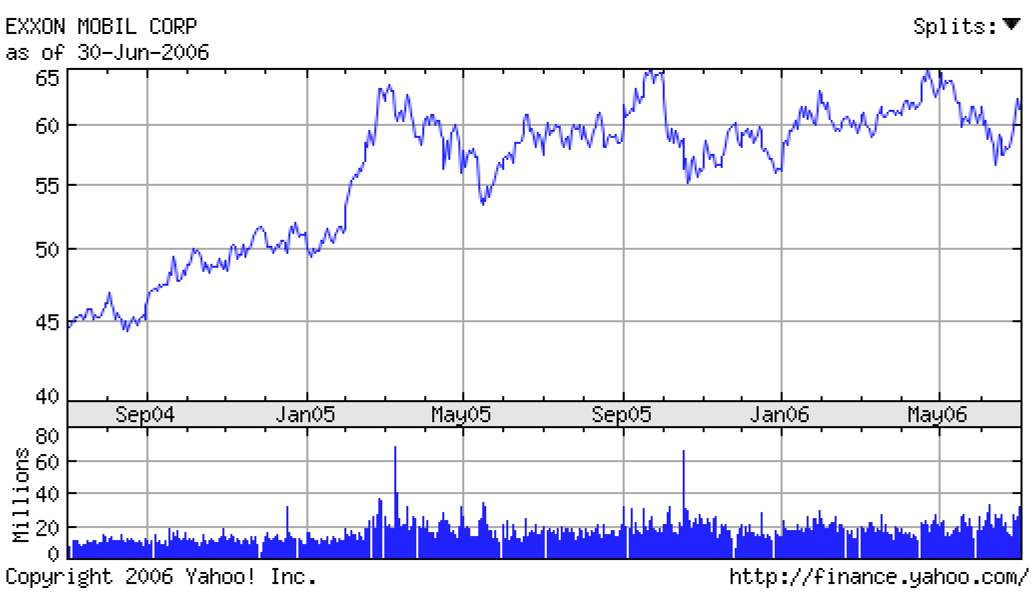

Figure 12 - EXXON MOBIL CORPORATION

One of the things we looked for when evaluating our long term market was looking at how it performed in the period of two years and if they would be potential for profit lurking around. And as you can see from the trend chart above that Exxon has been on a significant rise since End of January 2005 a rise that began from late 2004. Since that rise it has shut up to its all time high at late September to early October of 2005 with also a series of secondary trend from its shoot from early 2005, this company is certainly in a periodic bull, now the question is how long will it last. According to Dow period bull market usually lasts for about 2 years and since this market shoot in late January of 2005 we should not expect a significant drop until about 2007, this is taking a page out of our technical analysis book.

In addition to the potential of this stock, its in its value, since the early 20th century and invention of automobiles for transportation, they are fueled by this kind of companies and since transportation is something that drives the economy and the society there is confidence in this stock on the long term or at least there is an alternate energy that is competent to this market and can deter investor’s confidence. Therefore, we invested at a $50021.90 at a share price of 60.78 purchasing about 823 worth of stocks.

Our second long term company is the Honda Motor Corporation (HMC), was founded in 1946 in Japan. Honda manufactures motor products that include engines, motorcycles, watercraft, generators, lawn mower, lawn tractors, and sport cars for competitive racing. Their popular brands includes Accord, civic, Acura etc.

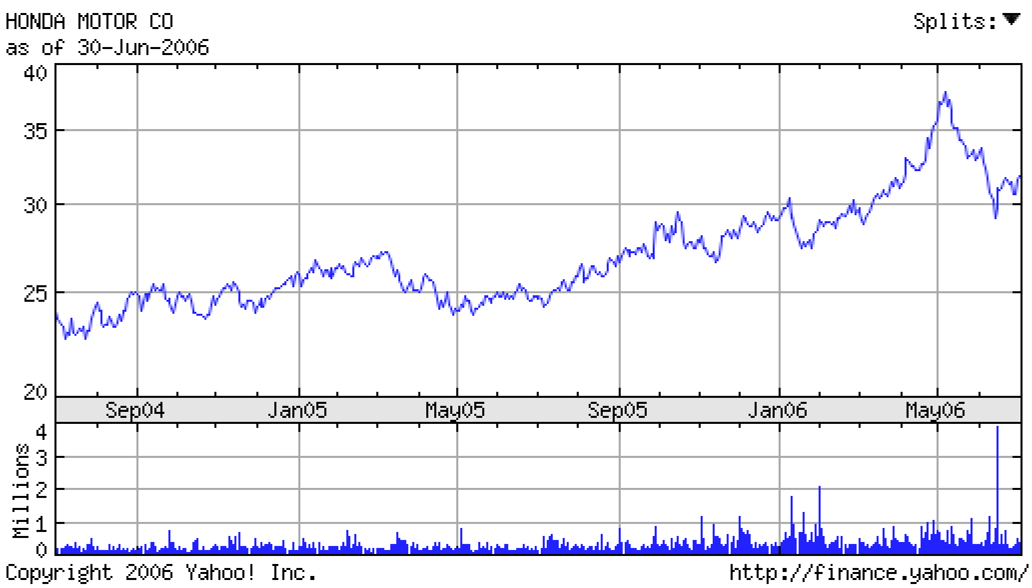

Figure 13 - HONDA MOTOR COMPANY

One of the interesting information on this company was the upwards rise in their market trends. From July of 2004 was the lowest low for the period of 2 yrs, they have been on a steady upward swing up till middle may which is understandable since the Dow has been dropping for almost a month. They hit another peak in early may of 2006, the technical analyst might find this new peak suspect and expect a drop, however since we are in this market on a long term basis we expect the market to steady and get back up, this gives us a good opportunity to buy at a lower cost at the moment and expect another upswing and we wait on this market.

Furthermore, an impressive aspect of this company is the value of its market. Honda is a top competitor in the American Automobile business and around the world. Their products are rated high in consumer report and have put them in a steady mode of demand and supply which will imply in the market that they will have investor’s confidence and they won’t be any steep downslide in the market, this investors an opportunity to be more flexible with their stocks by investing at anytime and looking for when you get a considerable high to get out of the market. Therefore, we invested at a $50008 at a share price of 32.90 purchasing about 1520 worth of stocks.

The third company in our long term investment is the Boeing Company (BA), Boeing is an Aerospace company that manufactures commercial airplanes, network systems, support systems, launch, and orbital systems. Boeing was added 1916 in Chicago Illinois, since then they have been spreading in the United States and around the world producing aviation needs for the military and commercial alike.

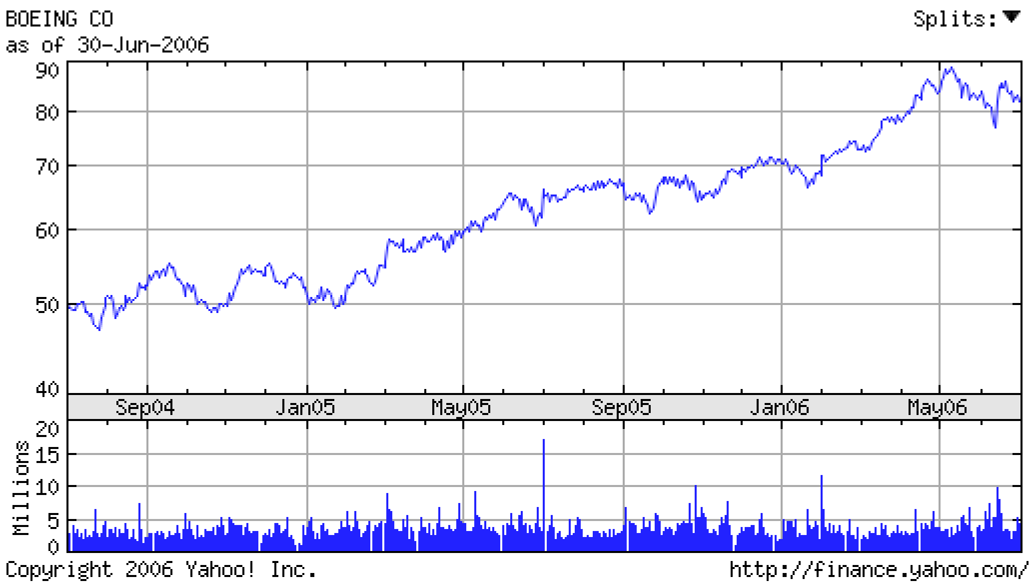

Figure 14 - BOEING COMPANY

This is another company like the Honda Motor Corporation that has been running on a bull trend since the period of almost 2 years. As observed from, late July 2004 to May 2006 it has been on a significant upward trend switching new highs along way. It also has some secondary upward trends which gives the potential of getting out of the market when getting into any downtrend.

Another thing we looked at was its value; Boeing is another company that has a long term history that started really at the beginning of the aviation history and as we know how this industry is important for transportation both commercially and military around the world. It is a global industry with dependency around the world, they are innovative in new products around the world for aircraft transportation, engine and all the support they provide in the aviation industry which is a sure way to boost investor’s confidence in the long run. Therefore, we invested at a $50009.99 at a share price of 84.46 purchasing about 592 worth of stocks.

The final company we invested in the long run was General Electric (GE), GE was founded in 1892 in Fairfield Connecticut, and they participate in the manufacture and development of products for generation, transmission, distribution, utilization of electricity and control. Their products include nuclear power support services, power generation, commercial and military jet engine, electrical distribution, delivers network television services and motion pictures to NBC as an affiliate.

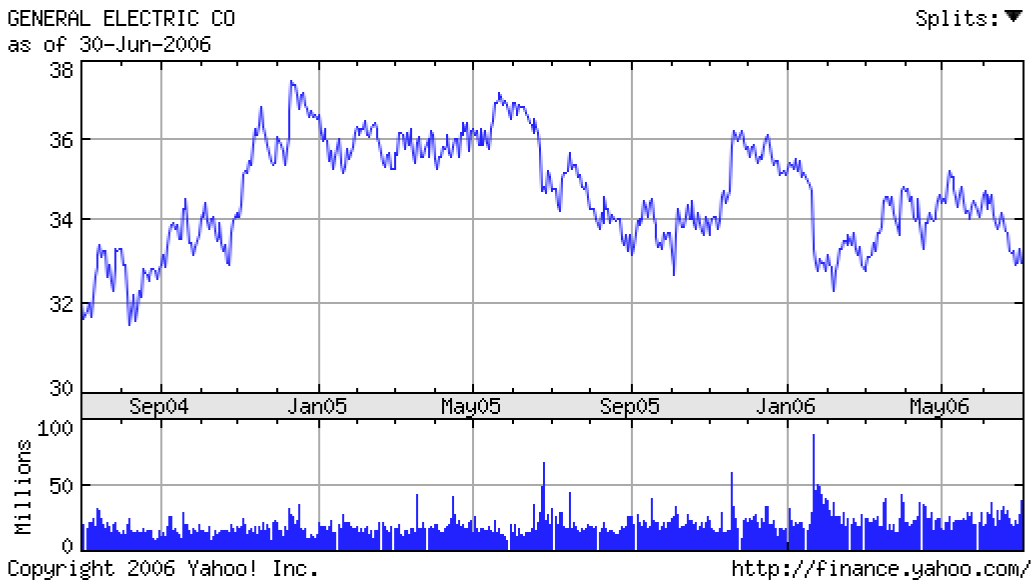

Figure 15 - GENERAL ELECTRIC COMPANY

One of the things that jump to us when investigating market chart is how unpredictable they look a technical analyst might find this suspect to investment because you could loose and loose big at any moment. With this uncertainty there is also lurking a potential of huge gain, at the beginning of December 2004 there was a big jump and there was also an upward trend from the period of late October 2004 to December of 2005 with series of secondary trends along the way from that moment comes a trend that looks somewhat like a downward trend, however according to Dow’s theory, sneaking a page from the technical analyst, there is a potential of another upward trend coming. This downward trend at the period of May 2006 gives us an opportunity to buy know that another upward trend that looked like the one from late October 2004 to December of 2005 is along the way. Even without the trends you can see that the jumps are huge from any slight secondary downward trend.

One of the things that make us believe in the potential of this company and in its ability to shoot for big upward trends is in its value. As we know that the aircraft industry is always changing and countries are always competing with the latest technology to gain an edge economically or militarily, with each innovation there will be boost in investor's confidence and the business of the existence of this company. This is a company in demand and supply especially in its products of power and technology, and there continue innovation a competitive world. Therefore, we invested at a $49995.39 at a share price of 34.05 purchasing about 1468 worth of stocks.

5.2 Market behavior

Date - 2006	Symb	Buy Price	share	Cost	Sell Price	Proceeds	Profit / Loss
22May	GE	33.37	1468	48992.16	$34.05	$49,985.40	$993.24
22May	BA	85.55	592	50650.6	$84.46	$50,000.32	($650.28)
22May	XOM	61.75	823	50825.25	$60.78	$50,021.94	($803.31)
22May	HMC	31.82	1520	48371.4	$32.90	$50,008.00	$1,636.60

Table 4 - Long-term Stock Simulation

One of the things we look at when analyzing the market behavior is even if lost some money is our understanding of the behavior. All our losses were expected as well as the profits the only thing lacking here was time.

In the case of GE from the market chart in the market simulation section GE was at the moment as expected experiencing a downward trend with series of little secondary upward trend, it was on one of the little secondary downward trend when we but the stock in May of 2006, with DOW on about 7 weeks slide it is fitting to see that it affected this market in investor’s confidence. Though alarming, its will not have a significant down effect on our stock in the long run, according to Dows’ theory we should expect a significant upward trend as little as in months.

The gains in Boeing and Exxon Mobile was expected this companies where high in the P/E rating and were on an upward trend on the market charts. The secondary downward trend was the period we had to buy the stock, the upside at the moment for these two companies is good as they are experiencing a bull; it is flexible for short term and long term trade in their values. Admitting that we are lucky to hit this upside, there is expected to be a downside along the way as to any market trend, in the long run the downward trend could be significant and the tables cold be turned as to what is happening in our GE and HMC market.

Finally the loss (1641.6) in the Honda Motor Corporation was also expected as it was experiencing a downward trend from its peak high on early May 2006. There is certainly value in the company but this is a characteristic of the market such as what happened to our stocks in GE, after the market hits its peak there is a downward trend along the way, we were caught in the early secondary downward trends it however helped to get our stocks at a cheaper rate but at the time period we have we cant reap that much of a profit. The only profit we could get in this situation will be in any secondary upward trend that will enable us to get out of the market however that won’t be enough to get any profit. It is certain that in the long run in the period of months or years that we could reap profit from another primary upward trend that will happen to this market but not at this moment. At the end of the long term investment including the profits and cash assets we have lost a total of $1255.88.

5.3 Conclusion

This was a fascinating method of investment that is very dependent on time and market charts. We have learned so much about the behavior of the market and its ability to be unpredictable sometime especially in the long run, we have also learned that is important to stay discipline and keep to timing. Not all stocks will stay on an upward trend forever and not all stocks will stay on the downward trend forever, and as seen in the case of GE and HMC we have lost because they are experiencing a primary downward trend and have gained in the case of BA and XOM because they are experiencing a high right now. In the long run the tables could be turned, knowing that they will turn and when they will turn gives us an advantage in the market because we understand the trends. When there is a primary low it will continue for a while because it hits on the investor’s confidence to loose trust in the stocks and when there is a high it continues because of a high investor’s confidence and the value of the stocks in demand and supply.

There is one thing to know that even if we are in a bear market or primary downward trend is that as long as there is value in the company there is always the potential that it can get back up. Investors will always come around, whenever there is an innovation, when something is new, a new CEO, changes in personnel and competitive decisions, this happens that could be unpredictable, and as well as it could happen for the progress of the company and their stocks it could also turn the table downwards. This is what left us with our losses and with the potential that we could get gains in the future if we had enough time in our long term stocks, six weeks is just not enough for a satisfactory gain.

Chapter 6: Final Conclusion

6.0 Revisions

This has been an interesting project that has really opened our knowledge to the stock market, bonds, securities and all the opportunities that lie. First we studied the history of stock market where we expanded our knowledge to Dow and how it affects the 3 biggest stock exchanges in America that includes NASDAQ, New York Stork Exchange, and American Stock Exchange. These exchanges are important in the trading of stocks, stocks are part of the companies that are owned as shares and the owner has the same privileges of any owner of the company. However, a broker is someone that sells the stock to potential owners and like most of the trading exchanges you need a broker, some of the other exchanges such as NASDAQ you can do the trading electronically a feat accomplished in the mid of the 20th century and technology kept improving. NYSE is the oldest of the exchanges, began in 1792 and has been bombarded with issues including the 1926 crash that led to the great depression; NASDAQ has the biggest equity market in the United States selling more volumes of stocks per day which is attributed by the small size and volatility of their stocks. NYSE however is a nonprofit corporation with about 1366 individual members that play important roles in the trading processes.

DOW is a market technical that indicates the behavior of the market, for over 100 years Dow’s theory has been used my technical analyst, fundamental analyst and other market observers around the world. It uses 3 averages to rate the behavior of the market DJIA (Dow Jones Industrial Average), DJUA (Dow Jones Utility Average), and DJTA (Dow Jones Transportation Average). The DJTA comprises of 20 stocks that belongs to the transportation industry of rail, air, sea, the DJUA has 15 stocks that belongs to the electrical and gas sectors, and the DJIA has 30 stocks that belongs to the industrial sectors. With these averages there are indexes placed to determine how well the market is doing from there analyst can tell if the market is in a primary bear or bull period.

We also investigated careful and methodical ways to invest from technical analyst method, fundamental analyst method, or random theorist. As the article in New York Times 1965 described that an investor has as good a chance in gambling in stocks as in any game of chance, this only supports the random theorist that investing is a game of chance if you lucky you can come up as a winner. However, if it was all gambling then we do not need any theory, this is only the random theorist believe and the purpose of our project is to investigate other methods that could be conclusive as a better investment method to gain profit. This brought us to the first method of the technical analyst, the technical analyst uses demand and supply to predict the potential of their stocks this was the scene of the famous theory for all technical analyst and market analyst alike known as the Dow Theory. Dow Theory was published by William Hamilton in 1908 which follows that a primary movement trend (upward or downward/bear or bull) is correlated by secondary movement trends and then reversed in a cyclic manner. The primary market period usually last for about one year then there is a switch to another trend, upward to downward vice versa. Other technical analyst methods includes R.N Elliot that there are 5 big waveforms (I, II, III, IV, V) where three of them are high and two of them are low then there is a point A where when it crosses this region there is an a-b-c correlation after this there will be a decline which also follows in a cyclic manner. However, the fundamental analyst is in the method of using values of the stocks, values that could be seen in the P/E ratio, history of the company, any potential that it could be consistent or improve in the long run. Fundamentalist will use resources in their disposal to find value of their stock that includes scientific data, economic data, research data, profit statements, industry surveys, every borrowing from market charts and trend charts from technical analysts. With all this methods the market is still unpredictable in the sense that you don't know what will happen in the future to affect investor's confidence such as natural disaster, CEO change, personnel decision, business decision, anything could be alarming to the company or the potential of the investors, all this issues are reflected on the market charts and trend analysis. In addition to employing this methods in our research we organized them in the kind of analysis that fit them, we exclusively used technical analysis for our short term trading and used fundamental analysis method for our long term trading and there is no home for Random theory in our research because there is no room to prove.

In addition to the market we also investigated bonds which is a good opportunity to gain almost inevitable profit in investment rather than stocks that are very unpredictable. They are fixed income securities issued by the government or Business Corporation to borrow money from investors that will lead to interest known as coupon at the maturity of the bond. Yield is an important aspect of the bond that relates to the price and interest, it is based on a calculation of coupon/price, and it is however directly proportional to the interest rate of the market, as the interest rate goes up the yield also goes up.

However, when the interest rate goes up older bonds are in jeopardy of competing in the market against new bonds because they bought their bonds at a higher price with a lower interest and the newer bonds are bought at lower price with higher interest, that is to say that the yields are almost the same except that the new ones are bought at a lower price while the older ones are just getting rammed by high interest catching up with the yield value and bought at a higher price. This is why it is almost imperative that you leave your bonds until it reaches maturity. The different kinds of bonds that we investigated in this project includes Zero Coupon bonds, Municipal bonds, HH savings bonds, Junk bonds, EE savings bonds, Corporate bonds, Bond funds and Convertible bonds. One of the major differences with these bonds is that they are either offered by the government or corporation therefore leaving investors to the reliability issues. This gives the government an advantage because it is almost inevitable that the government can never go bankrupt and there is always the potential for profit as long as the investor does not sell his bond before maturity which is affected by the interest rate and reflected on the yields. The government bonds are also tax-exempt both state and federal government and the zero coupon bonds is not affected by interest rate gives short term investors some flexibility to trade before maturity. There is also the rating system done by

S&P known as stock rating that gives values to the bonds, that is from AAA to A is good great quality, while BBB and BB, B are of medium quality, and CCC/CC/C and D are low or junk. Junk bonds are high risk bonds they are given by companies in financial or capital assistance; it is also issued by new companies that are also in need of investor's assistance to generate income to build. Junk bunds are usually very cheap with high risk, depending on which company you invest it also has the potential of high reward. For example a new technology company with new products in demand and supply has the potential of improvement and a dieing company with the assistance that comes to life also has the potential of reaping profit for investors because you bought it cheap, and if the situation gets better the bonds could be more expensive the yield can come down you can sell it before it reaches maturity and reap the benefit financially or capitally.

We also investigated broker companies, broker companies are an advantage in this new age of science of technology some flexibility in investment. They are a growing business For example TD water house has about 230 companies around the world and all the 50 states of the united states also grossing 66% and 29% in the US and Canada respectively. They offer mutual funds and equity ratings for help investors make smarter decisions.

For example Schwab rates about 3000 companies with a rating from A to F, A standing for strongly outperform and F standing for strongly underperformed. The advantages of these broker companies includes you could trade online and have their assistance at a cheap cost of about $12 per trade which is certainly cheaper than running all your trades through a broker at wall street. However there are also the disadvantages such as the illegal practices that led to the suing of TD water house that was involved in making payment to 3 investment advisory firms that made the firms directly link their clients to TD water house. This was a biased method of investment that it closed the clients to other competitors that had better advantages and flexibility than TD water house. It went against the Advisors/client conflict of interest this could hurt the name and the quality of these broker companies.

We also did our analysis in the practical trading in the market via long term and short term processes. Our short term trading included using technical analysis method that follows our buying/selling in a period of days and weeks, using demand and supply, observing the market trends to know when to buy in the company and when to sell in the company. It is an active way of investing that involves us diversifying our stocks and constantly buying and selling when we feel the need. We started our short term trading on 05/22/2006 and since then we traded in about 17 companies that includes in symbols SIRI, CNXT, SUNW, ATML, DECT, IIP, CHTR, NXG, ENCY, JDSU, DGSE, FNSR, ACEC, ACEL, BCON, CALD and CENF, during this period we picked the companies based on their potentials for highs and the price and volatility. Most of the stocks we got in these companies where like penny stocks from potential technological companies, which follows because in this age science and technology is always in demand and supply and that will always be in the minds of the big time investors. An active way we used for investing in these companies in Dow Theory knowing that in any primary market trend (bear/bull) there are always secondary trends, a downward secondary trend indicating buy and an upward secondary trend indicating sell. We looked for days where the products could be in demand such as the holidays and new products hitting the market that creates consumer excitement. It was a very productive practical method of investment that was showed in the result as we ended up with a profit of about $12,881.05

Our final practical investment was the long term trading, this was to invest in companies that we found had the potentials because of their values, the period of the investment will last through out our IQP. Finding value was the challenge in this mode of investment as we had to use the fundamentalist approach by checking research data, company history, profit, P/E ratio, also borrowing a page from the technical analyst method by observing the market chart and trends and understanding the future of the stock. In all we invested in 4 companies that includes Boeing (BA), Honda Motor Corporation (HMC), Exxon Mobile, and General Electric (GE), all this companies have been there, they have a history, they are innovative, and they fit the criteria of quality in the fundamentalist approach. We were able to understand that time is a value in this kind of investment because it is also dependent on primary market movement that could take months on years depending on when we enter the trade. This led to two losses in our trading in GE and Honda; it was obvious from the chart they were both observing a major downward trend which could also be back that the Dow has been down for weeks. However, this doesn't mean that we would not have reaped any profit, it only follows that we did not have enough time to wait for the stock to climb pack up which is a situation that could be easily approved. In addition our profit in Exxon and Bowing was also expected because they where both on a major upward trend and we were just riding with it, however if we left it long enough we should have hit a major downward which is also dependent on time and backed by Dow's theory.

The stock market in all represents a fascinating world of making profit which would ultimately depend on the skill and experience of the investor. Which leads us as a group to disagree with random theorist, the only unpredictability of the market is what could happen in the future, what if a natural disaster, what if there is corruption and lieing on earnings such as Enron, what is there is major product in the market such as the IPOD, so many things, this makes it fascinating, potential of profit is there just don’t ride the bull for too long cause you would end up on your back.

6.1 Recommendations

Our recommendations to the market is that for new investors no matter how ambitious you are, you need to start slow and get the feel and momentum of the market or it cause it will be a ride. If you going to be an active trader always diversify your stock because you might never be sure of the situation of the company. Always look for potentials especially in demand and supply or does the company have a new product in the market that is getting consumers very excited? Always try to get penny stocks on the short term trades because you don’t know if the company will suddenly start experiencing a major downward trend or bear market. If you are not sure, talk to a broker, an investment advisor, or someone with experience in the market. Be patient in the long term trade try to enter the market in its secondary downward trend from the charts you know if its primary trend its downward it will remain down but that’s where the patient factor is because if you have done your research on the value of the company chances are it will get back up and begin a new primary upward trend like a cycle. This is always why we don’t agree with the random theory, why do you want to enter a market based on instincts, the same instincts could lead to failure, why not enter the market based on potential for profit at lease you are well secure. Another market to be secure in it’s the bond, go for the government bonds the have the less risk you know that it is almost inevitable that the government will be there and you can save money on tax. Finally the market is unpredictable which gives the reasons to the random theorists that you have as good of a chance of gambling as investing in the stock market. Like we have analyzed, the market is only unpredictable in you don’t always know what will happen next, there could be a hurricane, business decisions, new products something that could automatically change investor’s confidence of the stock that could start a major trend (upwards or downwards).

6.2 Possible errors

The possibility for errors in this project is in the time frame and the experience of us as investors. For most of us, this is our first time really into the stock market and even though we have read books, done internet research, and practical research, experience is one of the keys becoming an expert in the stock market. You have to have highs and lows, might also need to have your heart broken sometimes to get the feel of it. What our research does for us is to present us with the skill and knowledge of situations that when faced with we can address them conclusive solutions. It is an unpredictable market that’s why the experience is needed to have a feel so that you don’t put yourself down emotionally when there is a major shift, you are already used to it and your next move comes naturally.

In addition is the time frame we had for the project, it is conclusive for short term trade but cannot be conclusive for a long term trade (6 or 7 weeks on a long term trading is not conclusive for our experiment for waiting time). We needed more time for the long term trade, for example the money we lost in our long term trade was expected because the two companies in GE and Honda where on a major downward trend which could also be characterized in the low that the Dow has been experiencing in this weeks. These are things we cannot control that’s why it is imperative that we use months and years to wait for the next primary upward trend which is inevitable according to Dow's theory.

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TIME TABLE

<table>
<tr><th>Member</th><th>Week 1</th><th>Week 2</th><th>Week 3</th><th>Week 4</th><th>Week 5-6</th><th>Week 7</th></tr>
<tr><td>Tracy</td><td rowspan="3">Three first chapters of the stock market book</td><td>Fix income investment concentration on— corporate bonds, bonds funds , convertible bonds</td><td rowspan="3">Short term investment trends – buying and investigating stocks from three different companies in a two week period</td><td>Merrill Lynch, final short term investment report</td><td rowspan="3">Long term investment trends – another review from the stocks bought from the three companies, a four week period</td><td rowspan="3">Final paper</td></tr>
<tr><td>Bhanu</td><td>Fix income investment concentration on – HH savings bonds, Junk bonds, EE savings bonds</td><td>Charles Schwab, final short term investment report</td></tr>
<tr><td>Augustine</td><td>Fix income investment concentration on – Zero coupon bonds, Municipal bonds, Bond Basics</td><td>TD waterhouse, final short term investment report</td></tr>
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